a pseudo internal signal generator for separating, integrating, and converting signals to be transferred between the SDL execution unit and the external environment description unit; and

a queue manager having an internal queue for holding the signals to be transferred between the SDL execution unit and the external environment description unit;

whereby no separate task is assigned by the operating system to the SDL execution unit and overhead of the operating system is thereby reduced.

REMARKS

A final Office Action was mailed on July 3, 2002. Claims 1 – 3 are pending in the present application. Claims 1 and 3 are amended. No new matter is introduced.

ACKNOWLEDGEMENT OF PRIORITY CLAIM

Coincident with filing the present patent application on September 29, 1998, Applicants filed a declaration claiming priority from Japanese Patent Application 10-128835, filed on May 12, 1998. Applicants also filed a certified copy of the priority document at that time. Acknowledgement of the claim and filing of the certified copy was not provided in the Office Actions of July 3, 2002 and December 10, 2001. Applicants respectfully request the Examiner to confirm and provide acknowledgement of the claim and filing of the certified copy with his reply to the present Response.

REJECTION UNDER 35 U.S.C. §§ 103

Claims 1 – 3 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,414,762 to Flisik et al. in view of U.S. Patent No. 6,009,093 to Choe. Applicants amend claims 1 and 3 to better clarify the nature of their invention, and respectfully traverse this rejection.

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Applicants disclose an information processing method and apparatus for managing one or more specification and description language (SDL) execution units. A potential problem anticipated in such an environment is the operating system overhead associated with creating tasks for the one or more SDL execution units.

As a means of addressing this problem, as claimed in Applicants' claim 3, signals are transferred between an SDL execution unit and an external environment description unit under a single task assigned by the operating system to the external environment description unit only, without assigning a separate task to the SDL execution unit (see, e.g., Applicants' specification at page 7, line 35 through page 8, line 9). In this manner, the overhead of the operating system is reduced. To realize the communication between the SDL execution unit and the external environment description unit, the apparatus according to claim 3 includes an adapter, a pseudo internal signal generator, and a queue manager that operate to transform signals from the external environment description unit into a form that can be interpreted by the SDL execution unit (see, e.g. page 6, line 22 through page 8, line 9).

Flisik discloses a telephony controller for communicating with a PABX. The system of Flisik includes a telephony controller 20 including a command converter control 56 to generate PABX commands and a communication layer 30 that handles communications with data terminals coupled to the controller 20. In contrast to Applicants' claimed invention, the Flisik does not disclose a single operating system for operating the common layer 30 and the interface PABX 40. Therefore, in the case of Flisik, there is no motivation to reduce an overhead of the single operating system. This reference merely discloses a technique to communicate between a computer and the PABX without depending on a vendor specific PABX protocol.

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In column 9, lines 62 – 67 of Flisik, communication from the socket processes SP to the monitor module 58 is mentioned. In the preferred embodiment, the socket communication method is identified as Unix socket communication.

According to this socket communication, the same task cannot carry out both the process between the communication layer and the PABX interface. In other words, it is necessary in the system of Flisik to assign separate operating system tasks to the communication layer and to the PABX interface respectively. This assignment of tasks causes an increase in the overhead of the operating system over Applicants' claimed approach. Flisik does not disclose or suggest that there is a problem associated with operating system overhead, and accordingly does not disclose or a means for solving this problem. In sharp contrast, Applicants' claimed invention resolves this problem by providing the arrangement as claimed in claim 3.

Choe discloses a method and apparatus for interfacing a private exchange to ISDN. While Choe discloses an operating procedure incorporating SDL in a PBX environment, it fails to otherwise disclose the above-discussed aspects of Applicants' claimed invention that are not taught or suggested by Flisik. Thus, even if the Flisik and Choe are combined, the present invention is not an obvious combination of Flisik and Choe.

Accordingly, Applicants respectfully submit that claim 3 stands allowable over Flisik. Applicants repeat the above argument with respect to claim 1, which claims a method providing for signals to be transferred between an SDL execution unit and an external environment description unit under a single task assigned by an operating system to the external environment description unit only, without assigning a separate task to the SDL execution unit. Applicants therefore submit that claim 1 stands in condition for

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allowance. As claim 2, depends from allowable claim 1, Applicants submit that claim 2 stands in condition for allowance for at least this reason.

CONCLUSION

An earnest effort has been made to be fully responsive to the Examiner's objections. In view of the above amendments and remarks, it is believed that claims 1 - 3, consisting of independent claims 1 and 3 and the claims dependent therefrom, are in condition for allowance. Passage of this case to allowance is earnestly solicited. However, if for any reason the Examiner should consider this application not to be in condition for allowance, he is respectfully requested to telephone the undersigned attorney at the number listed below prior to issuing a further Action.

Attached is a marked up version of the changes made to the claims by the current amendment. The attached pages are captioned **"Version With Markings To Show Changes Made"**.

Any fee due with this paper may be charged on Deposit Account 50-1290.

Respectfully submitted,

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IN THE CLAIMS

1. **(Amended)** An information processing method for use with an SDL execution unit described in a specification and description language (SDL), an external environment description unit described in a programming language other than the SDL, and an adapter having a pseudo internal signal generator and a queue manager, <u>and an operating system,</u> the method comprising the steps of:

connecting the SDL execution unit and the external environment description unit to each other through the adapter so that signals containing at least one of messages, events and parameters may be exchanged between the SDL execution unit and the external environment description unit through the adapter;

assigning a <u>single</u> task [of an operation] <u>by the operating</u> system to the external environment description unit <u>without assigning a separate task by the operating system to the SDL execution unit;</u> and

executing the task so that the pseudo internal signal generator may convert and transfer the signals between [the] SDL execution unit and the external environment description unit.

3. **(Amended)** An information processing apparatus for processing information under the control of a task assigned by an operation system, comprising:

<u>an SDL execution unit described in a specification and description language (SDL);</u>

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an external environment description unit described in a programming language other than SDL; and

an adapter for connecting [an] the SDL execution unit described in [a specification and description language] (SDL) and [an] the external environment description unit described in a programming language other than the SDL to each other so that signals may be transferred between the SDL execution unit and the external environment description unit through the adapter under a single task assigned by the operation system to the external environment description unit, the adapter having:

a pseudo internal signal generator for separating, integrating, and converting signals to be transferred between the SDL execution unit and the external environment description unit; and

a queue manager having an internal queue for holding the signals to be transferred between the SDL execution unit and the external environment description unit;

whereby no separate task is assigned by the operating system to the SDL execution unit and overhead of the operating system is thereby reduced.